March 4, 2010 12:41:46 PM



Page 1

Item ID:

D3676-1

Accept

Setup Start

Stop



Revision ID:

Item Name:

BUBBLE WINDOW

Start Date:

Required Date: 3/12/10

3/05/10

Start Qty: 2.00

Reg'd Qty: 2.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date: 10-3-04 Tooling:

Date:

SPC (Y/N):

Date: Date:

Draw

Rev.

Run

Start

Stop



QC:

Operation

Description

Set Up/ Run Hours Draw Number Plan Accept Code Oty

Reject Qty

Reject Number Stamp

Insp.

DL 10/03/15

Draw Nbr

Sequence ID/

Work Center ID

Revision Nbr

D3676 Rev B

100

Thermoform

Thermoforming Machine

HAND FINISHING THERMOFORMING

Memo

0.00

0.00

Set up Machine as per folio FTA 018 and D3676 program

110

Thermoform

HAND FINISHING THERMOFORMING

Cut Blanks to 33.5" by 50"

Memo

0.00

0.00

Thermoforming Machine

120

Thermoform

Thermoforming Machine

0.00

THERMOFORMING MACHINE

0.00

Thermoform as per Dwg. D3676 and Folio FTA 018@ Dwg. Rev.

Folio Rev.

		3
Order and		

March 4, 2010 12:41:46 PM



Page 2

Item ID:

D3676-1

Accept

Setup Start

Stop



Revision ID:

Item Name:

BUBBLE WINDOW

Start Date:

3/05/10

Start Qty: 2.00

Required Date: 3/12/10

Reg'd Qty: 2.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID

OC Quality Control Operation Description

QC2-Inspect parts off machine FAI/FAIB

Set Up/ **Run Hours**

Draw Number Draw Rev.

Plan

Code

Accept Qty

Reject Qty

Reject Number Stamp

Insp.

Memo

0.00

0.00

1) Check Surface finish for undesired marks, voids, dimples etc. 2) Check depth of bubble to ensure conformity to drawing tolerances.

140

OC

Quality Control

QC8- Inspect parts - second check

0.00

Memo

0.00

1403/18 (XZ)

150

Thermoform

Thermoforming Machine

Memo

HAND FINISHING THERMOFORMING

0.00

0.00

1) Trim off excess flange material 2) Buff out any light scratches or blemishes □3) Etch part number and batch number

Dart Aerospace Ltd W/O: WORK ORDER CHANGES Approval Approval DATE STEP PROCEDURE CHANGE By Qty Chief Eng / Date QC Inspector Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ___ Date: ____ Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: ____ WORK ORDER NON-CONFORMANCE (NCR) NCR: Corrective Action Section B Description of NC Verification Approval Approval STEP DATE **Action Description** Sign & Initial QC Inspector Section A Section C Chief Eng Date Chief Eng Chief Eng

March 4, 2010 12:41:52 PM



Page 3

Item ID:

D3676-1

Accept

Setup Start



Revision ID:

Item Name:

BUBBLE WINDOW

Start Date:

3/05/10

QC:

Start Qty: 2.00

Required Date: 3/12/10

Req'd Qty: 2.00



Cust Item ID:

Customer:

Run

Start

Stop



Reference: Approvals:

Process Plan:

Date: Date: Tooling:

SPC (Y/N):

Date: Date:

Stop



Sequence ID/ Work Center ID

Operation Description

QC2- Inspect parts off machine FAI/FAIB

Set Up/ Run Hours

0.00

0.00

0.00

Draw Number

Draw Rev.

Plan Accept Qty Code

Reject Qty

Reject Number Insp. Stamp

Quality Control

170

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00



Memo

Memo

1) VIsually inspect for clarity, and proper formation.



180

Packaging

Packaging

Identify as per dwg & Stock Location:

Memo

0.00

Dart Aerospa	ace Ltd	
--------------	---------	--

W/O:		WORK ORDER CH	IANGES				
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3676-1 PAR #: Fault Category: Demo furning NCR: Yes No DQA: Date: 1003-15

Resolution: Accepted Disposition: Use AS IS QA: N/C Closed: Date: 10 103 130

NCR: 5	1691	We	ORK OR	DER NON-CONFORMANC	E (NCR)			1.5
DATE	OTED	Description of NC		Corrective Action Section B	Verification Section C	Approval Chief Eng	Approval QC Inspector	
DATE	STEP	Section A	Initial Action Description Chief Eng Chief Eng					Sign & Date
10/03/16	# 110	has two Dougles in center Food settin of wondow St Dopol water came in	Sosiun	Chillips and a second	10/03/16	Solonlis	Lisianz	8 looks
		out of Air gun (Possible) when blowing dust off the Steets prior to forming. l.c. process.	Josem	Do not attupt to Perme			Come	Solorlis

March 4, 2010 12:41:52 PM



Page 4

Item ID:

D3676-1

Accept

Setup Start

Stop



Revision ID:

Item Name:

BUBBLE WINDOW

Start Date:

3/05/10

Start Qty: 2.00

Required Date: 3/12/10

Req'd Qty: 2.00



Cust Item ID:

Customer:

Draw

Number

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

QC:

Date:

SPC (Y/N):

Set Up/

Run Hours

Date:

Stop

Start

Sequence ID/ Work Center ID

Operation

Description

Memo

QC21- Final Inspection - Work Order Release

0.00

0.00

Draw Rev.

Plan Accept Code Qty

Reject Qty

Reject Insp. Number Stamp

Quality Control

U w.03.16

Dart Aerospace Ltd

W/O:				WO	RK ORDER CHANG	ES				1
DATE	STEP		PRO	OCEDURE CHAP	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No					Jory:					
	Reso	olution:							Date: _	
NCR:				WORK ORDE	R NON-CONFORMA	ANCE (NCF	R)			
DATE	STEP		iption of NC	Corrective Action Section B			Verifi	cation	Approval	Approval
	0.2.	Section A		Initial Chief Eng	Action Description Chief Eng	Sign 8 Date	Sect	ion C	Chief Eng	QC Inspector
				Sa.					11	

Picklist Print

March 4, 2010 12:39:54 PM

Page 💆

Work Order ID: 56691

Parent Item:

D3676-1

Parent Item Name:

BUBBLE WINDOW

Comments:

IPP Rev A New Product

01/24/2008 DL Verified:JLM

IPP Rev B Change Mat. to .236"" 08/29/2008 DL

Purchased

Start Date: 3/05/10

Start Qty: 2.00

Required Date: 3/12/10

Required Qty: 2.00

Component Item ID/ Item Name

Item ID

Replacement Mfg/ Purch

Bin Primary Item Location

Last Location

Route Seq ID

Unit of Measure

Qty on Hand 240.0000 26,0130

Remaining Qty Qty To Pick Issued

Date Issued

Status

MACRLICS.236

Plexiglass G .236"

Warehouse Location Main Warehouse

> MAT 110577

> > 113571

240 99 141

Loc Qty

Loc Code

Dart Aerospace Ltd WORK ORDER CHANGES W/O: Approval Approval PROCEDURE CHANGE DATE STEP By Date Qty Chief Eng / Prod Mgr QC Inspector Part No: ______ PAR #: ____ Fault Category: ______ NCR: Yes No DQA: ____ Date: ____ Resolution: _____ Disposition: _____ QA: N/C Closed: ____ Date: ____ WORK ORDER NON-CONFORMANCE (NCR)

NCR:				ER NON-CONFORMAN				
D.4.T.E		Description of NC		Corrective Action Section 8		Verification	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	QC Inspector
								+
								e:

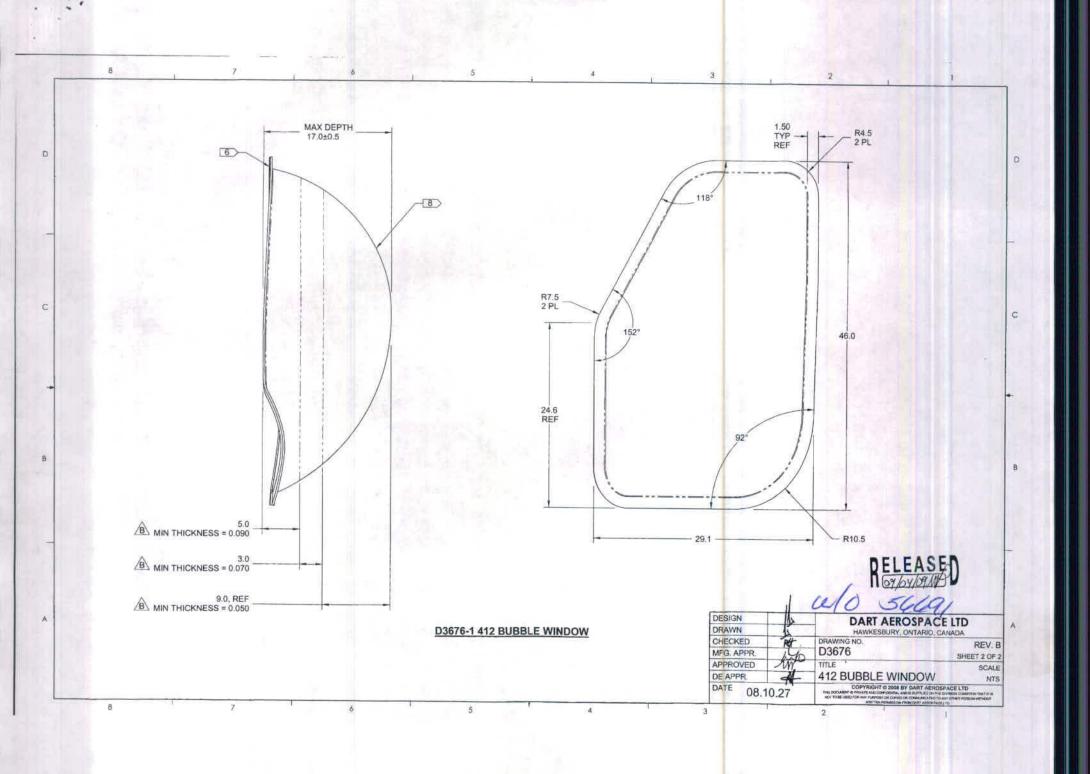
DART AERO	SPACE LTD			Wo	ork Order:	56691 #2
Description:	412 Busses	WINDOW		Pa	art Number:	D3676-1
Inspection Dwg	g: Rev:	- 1			E E	Page 1 of 1
	FIRST	ARTICLE INSI	PECTION	CHECK	LIST	
	x	First Article		Prototy		
	т	HERMOFORI				
Description			Accept	Reject	Method of Inspection	
nside Radii less	than"		~	658		
Shape Definition			V			
Texture Retention			V			
Material imperfe scratching	ctions such as bumps	, cracks, voids,	V			-
	46					
	Tarry Victor					
-						
Measured by:	B				Date:	10/03/16
		TRIMMING	SECTIO	N		, /
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
46		4/2.375				
29.1		29.775				
17	± .5	17.125				
090		. 101				
.070		. 097				
.050		.093				
	V					
			-			
						1/15/53
Measure	d by:				Date:	10/03/16
Audited				L	Date:	
Prototype Appro	~ ~					10/03/16
	aminut started		Will be		Date:	
Rev Date	Change				Revised	by Approve
A	New Issue				KJ/DL	

KJ/DL

N N	

3 D SETTIFFTOFF RETURN TO ENGINEERING UNCONTROLLED CONY SUBJECT TO AMENDMENT WITHOUT HOTHER D3676-1 412 BUBBLE WINDOW REVISED TOLERANCE ON MINIMUM THICKNESSES (ZN A8/B8-2) REASON: PRODUCTION FACILITY. NOTES:
1) MATERIAL: PLEXIGLAS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C OR POLYCAST II CLEAR ACRYLIC SHEET PER MIL-P-5425, 0.236 THICK (STOCK REF. DART SPEC. M-ACRYLIC-S.236) 08.10.27 08,02.29 REV BY DATE 2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.010 TO 0.020 MAX
6) IDENTIFICATION: ENGRAVE PIN "D3678-1" & BIN "BXXXXX" ON FLANGE WITHIN 0.25" OF BUBBLE.
USE 0.125" LETTERS TO MAX. DEPTH OF 0.005" DESIGN DART AEROSPACE LTD DRAWN HAWKESBURY, ONTARIO, CANADA DRAWING NO. CHECKED REV. B MFG. APPR. D3676 SHEET 1 OF 2 APPROVED TITLE 7) WEIGHT: 11.0 lbs 8) VACUUM FORM PER FOLIO FTA018 USING DT8992 MOLD AND DART QSI 022 SCALE 412 BUBBLE WINDOW DE APPR NTS COPYRIGHT © 2008 BY DART AEROSPACE LTD
THE DOCUMENT IS TREASTE AND COMPOSITION AND IS SUFFICIAL OF THE CONTROL OF COMPOSITION OF USED FOR ANY TURNOSE OF COMPOSITION AND ANY AT IS TO ANY COMPOSITION FROM DATE 08.10.27 8

100 da 1			
and the second			
112			
103			
1.53			
- T			
EPLA .			
- Fa)			
1.57			
A STATE OF			
REED .			
100			
1			



Description of the second		
TERE.		
110		
54		

DART AEROSP	ACE LTD			Wo	rk Order:	56691 #1
Description:	412 BUBBLE	(Disson)		Pa	rt Number:	D3676-)
nspection Dwg:	D3676 Rev: B),				Page 1 of 1
	х	RTICLE INSF First Article HERMOFORM		Prototyp		
Description			Accept	Reject	Method of Inspection	Comments
nside Radii less th	an"		V			
Shape Definition			V			
Texture Retention			V			
	ons such as bumps,	cracks, voids,	~			1 11
scratching						
scratching						100
scratching						197.71
scratching						100
	PR				Date	10/03/16
	38	TRIMMING		ON.	Date	19/03/16.
	Tolerance	TRIMMING Actual Dimension)N Reject	Date:	1 201
Measured by:		Actual	SECTIO		Method of	1 - 21
Measured by:		Actual Dimension	S SECTION Accept		Method of	1 201
Drawing Dimension		Actual Dimension	S SECTION Accept		Method of	1 - 21
Drawing Dimension	Tolerance	Actual Dimension 46.75	SECTIO		Method of	Comments
Drawing Dimension 17 17 090	Tolerance	Actual Dimension 46.75' 27.75' 17	Accept V		Method of	1 - 21
Drawing Dimension	Tolerance	Actual Dimension 46.75	Accept V		Method of	1 - 21
Drawing Dimension 17 17 090	Tolerance	Actual Dimension 46.75' 27.75' 17	Accept V		Method of	1 - 21
Drawing Dimension 17 17 090	Tolerance	Actual Dimension 46.75' 27.75' 17	Accept V		Method of	1 - 21
Drawing Dimension 17 17 090	Tolerance	Actual Dimension 46.75' 27.75' 17	Accept V		Method of	1 - 21

	Measure	ed by: RB	Date: D	03/16.
	Audite	ed by:	Date: 10	103/16
Proto	type App	roval:	Date:	
Rev	Date	Change	Revised by	Approved
Α		New Issue	KJ/DL	

		141			
			20		
	98				
*					
	-				